

IN THE CLAIMS

1. (Original) A vapor generator comprising:
  - a combustion chamber;
  - an outer structure surrounding the combustion chamber, wherein a cavity is located between the combustion chamber and the outer structure;
  - a water inlet located in the outer structure, wherein the water inlet is configured to receive water into the cavity;
  - a water injection element configured to introduce water to the combustion chamber;
  - a water conduit coupling the cavity to the water injection element, wherein the water conduit is configured to transfer water from the cavity to the water injector element.
2. (Original) The vapor generator of Claim 1, wherein the combustion chamber comprises a first cylindrical element and the outer structure comprises a second cylindrical element, wherein the cavity is located between the first and second cylindrical elements.
3. (Original) The vapor generator of Claim 2, wherein the first and second cylindrical elements are tapered at each end.
4. (Original) The vapor generator of Claim 3, further comprising:
  - a first connector element joining first ends of the first and second cylindrical elements, wherein the

combustion chamber is exposed through an opening in the first connector element; and

a second connector element joining second ends of the first and second cylindrical elements, wherein the combustion chamber is exposed through an opening in the second connector element.

5. (Original) The vapor generator of Claim 1, further comprising:

an ignition inlet extending into the combustion chamber, wherein the ignition inlet is configured to receive an ignition element for introducing sparks to the combustion chamber;

a fuel inlet extending into in the combustion chamber, wherein the fuel inlet is configured to receive fuel into the combustion chamber; and

an air inlet extending into the combustion chamber, wherein the air inlet is configured to receive air from a blower unit; and

a vapor outlet extending out of the combustion chamber, wherein the vapor outlet is configured to provide vapor exhaust from the combustion chamber.

6. (Original) The vapor generator of Claim 5, further comprising a baffle element coupled to the air inlet, wherein the baffle element shields the ignition inlet and the fuel inlet from the air inlet.

7-34 (previously cancelled)

35. (previously added) The vapor generator of Claim 6, wherein the water injection element is located away from the

baffle element, such that the baffle element does not shield the water injection element.

36. (previously added) The vapor generator of Claim 5, wherein ignition inlet, fuel inlet and air inlet are all located adjacent to a first end of the combustion chamber, and the vapor outlet is located at a second end of the combustion chamber, opposite the first end.

37. (previously added) The vapor generator of Claim 36, wherein the ignition inlet and the fuel inlet are located about the same distance from the first end of the combustion chamber.

38. (previously added) The vapor generator of Claim 37, wherein the ignition inlet and the fuel inlet are located about the 3 ½ inches from the first end of the combustion chamber.

39. (previously added) The vapor generator of Claim 37, wherein the wherein the air inlet is located at the first end of the combustion chamber.

40. (previously added) The vapor generator of Claim 5, further comprising a water supply coupled to the water inlet.

41. (previously added) The vapor generator of Claim 40, wherein the water supply comprises a water pump.

42. (previously added) The vapor generator of Claim 40 wherein the water supply is configured to keep the cavity substantially full of water.

43. (previously added) The vapor generator of Claim 5 wherein the water injection element is configured to introduce water into the combustion chamber as a spray.

44. (previously added) The vapor generator of Claim 5, wherein the ignition element comprises a spark plug.

45. (previously added) The vapor generator of Claim 5, further comprising an air blower coupled to the air inlet.

46. (previously added) The vapor generator of Claim 5, further comprising a fuel supply coupled to the fuel inlet, the fuel supply comprising propane or natural gas.

47. (previously added) The vapor generator of Claim 1, wherein the combustion chamber is sufficiently long to allow the fuel introduced to the combustion chamber to burn completely within the combustion chamber.

48. (previously added) A vapor generator comprising:  
a combustion chamber having a first end configured to receive an input air flow, an input fuel flow and an ignition source, and a second end configured to provide an output vapor flow;

an outer structure coupled to the combustion chamber, wherein the outer structure surrounds the combustion chamber and defines a cavity between the combustion chamber and the outer structure;

a water supply configured to introduce water into the cavity through a first opening in the outer structure;

a water conduit configured to receive water from the cavity through a second opening in the outer structure; and

a water injector configured to receive water from the water conduit, and in response, introduce a water flow into the combustion chamber.

49. (previously added) The vapor generator of Claim 48, wherein the cavity extends from the first end of the combustion chamber to the second end of the combustion chamber.

50. (previously added) The vapor generator of Claim 48, wherein the water injector is configured to introduce the water flow at the first end of the combustion chamber.

51. (previously added) The vapor generator of Claim 48, wherein the combustion chamber comprises a first cylindrical element and the outer structure comprises a second cylindrical element, wherein the cavity is located between the first and second cylindrical elements.

52. (previously added) The vapor generator of Claim 48, wherein the combustion chamber is tapered at the first end and the second end.

53. (previously added) The vapor generator of Claim 48, further comprising a baffle element located at the first end of the combustion chamber and configured to shield the input fuel flow from the input air flow.

54. (previously added) The vapor generator of Claim 53, wherein the water injector is located away from the baffle element, such that the baffle element does not obstruct the water flow introduced by the water injector.

55. (previously added) The vapor generator of Claim 48, wherein the water supply comprises a water pump.

56. (previously added) The vapor generator of Claim 48 wherein the water supply is configured to keep the cavity substantially full of water.

57. (previously added) The vapor generator of Claim 48 wherein the water injector is configured to introduce water into the combustion chamber as a spray.

58. (previously added) The vapor generator of Claim 48, wherein the combustion chamber is sufficiently long to allow fuel introduced to the combustion chamber by the input fuel flow to burn completely within the combustion chamber.